

Scaled data based on original data using
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for
Cooper Lighting Solutions
(formerly Eaton)

Brand: LUMARK

Report Number: P195527

Luminaire Tested: **NAV-AF-05-D-UNV-AFL-7050-1200-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P195527
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24283)
Test Lab: INNOVATION CENTER P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: NAV-AF-05-D-UNV-AFL-7050-1200-HSS
Description: NAVION ROADWAY AND AREA LUMINAIRE
(5) 70 CRI, 5000K, 1200mA LIGHTSQUARES WITH 16 LEDS EACH AND AUTOMOTIVE FRONTLINE OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 27687 lumens
Efficiency: N/A
Efficacy: 86.5 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1.5' x H: 0')
IES Classification: Type II - Short - Full Cutoff
BUG Rating: B2 - U0 - G2

Input Watts (W): 320
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT

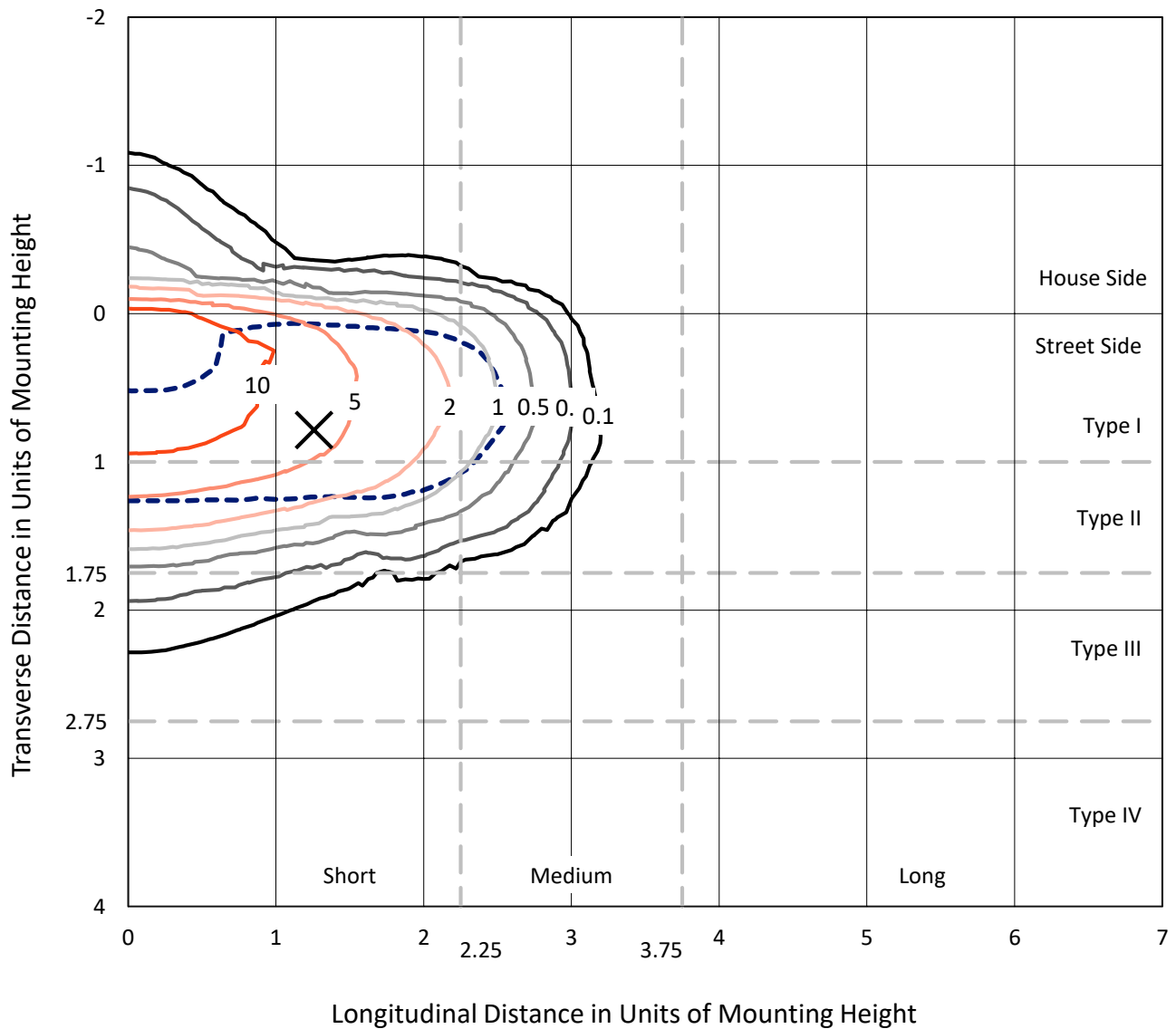


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Iso-Footcandle Lines of Horizontal Illumination

✕ Max cd
 - - - 1/2 Max cd

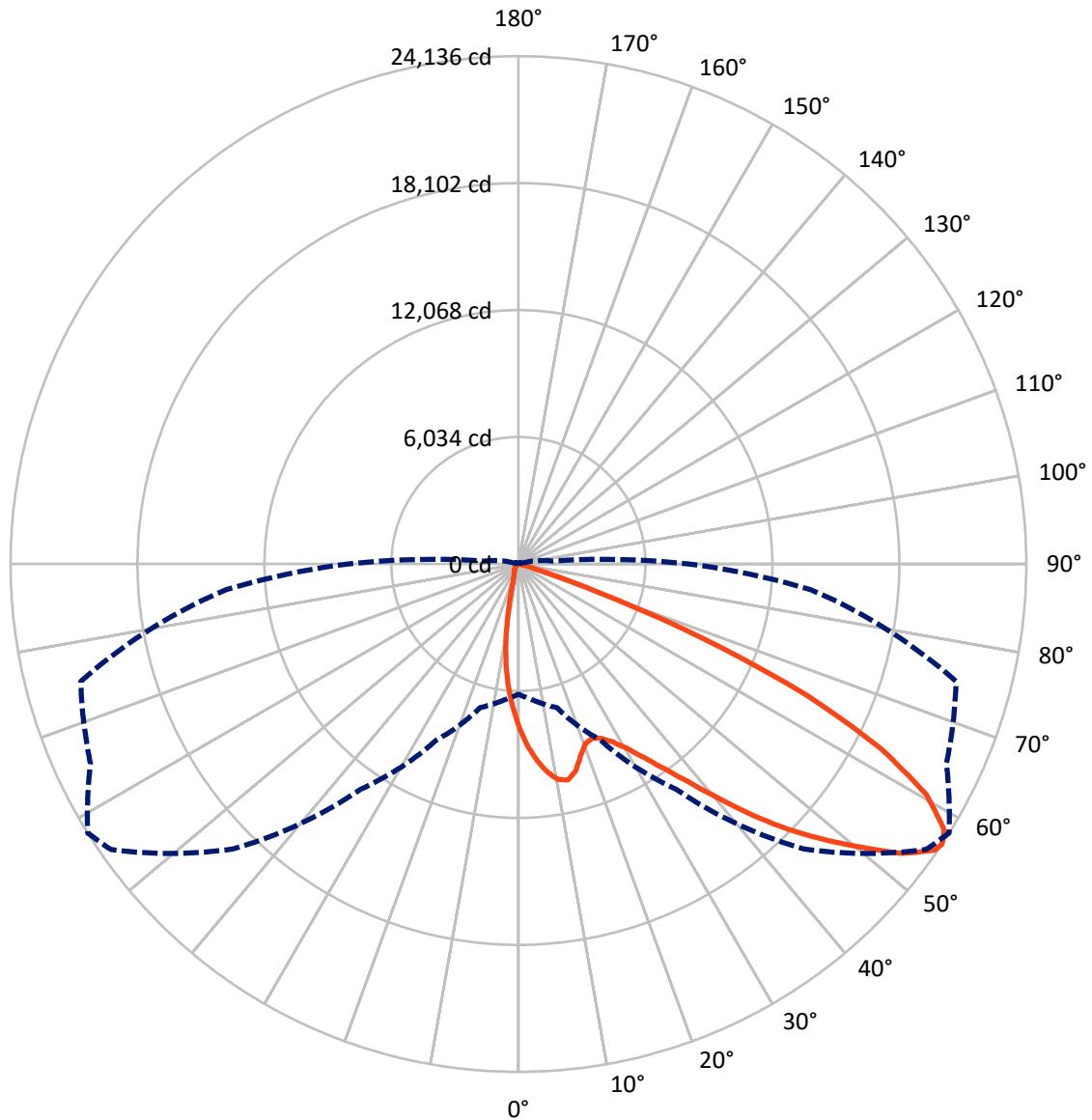


Based on 25 foot mounting height. Maximum calculated value = 15.6 fc
 Type II - Short - Full Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 58-Deg Lateral - - - Horizontal Cone Through 56-Deg Vertical

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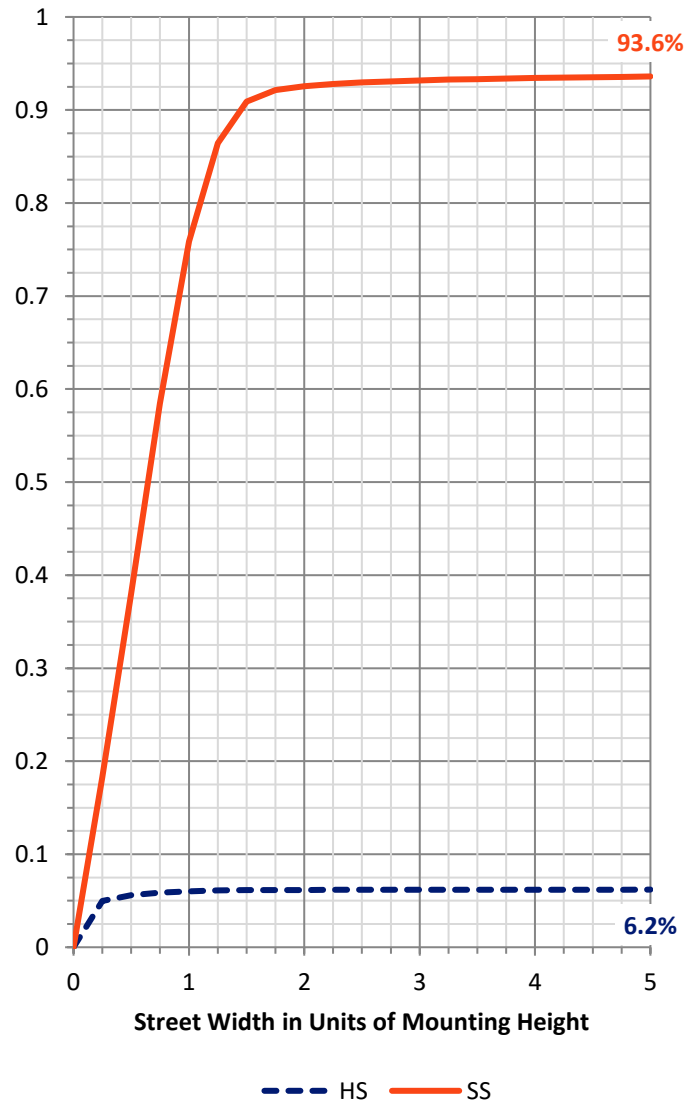
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1728.2	0.0	1728.2
	% Fixture	6.2	0.0	6.2
Street Side	Lumens	25958.8	0.0	25958.8
	% Fixture	93.8	0.0	93.8
Total	Lumens	27687.0	0.0	27687.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	668.7	2.4
10°-20°	1556.0	5.6
20°-30°	2618.2	9.5
30°-40°	4483.4	16.2
40°-50°	6765.6	24.4
50°-60°	7032.6	25.4
60°-70°	3948.0	14.3
70°-80°	541.1	2.0
80°-90°	73.3	0.3
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-90°	27687.0	100.0
0°-180°	27687.0	100.0

Coefficient of Utilization



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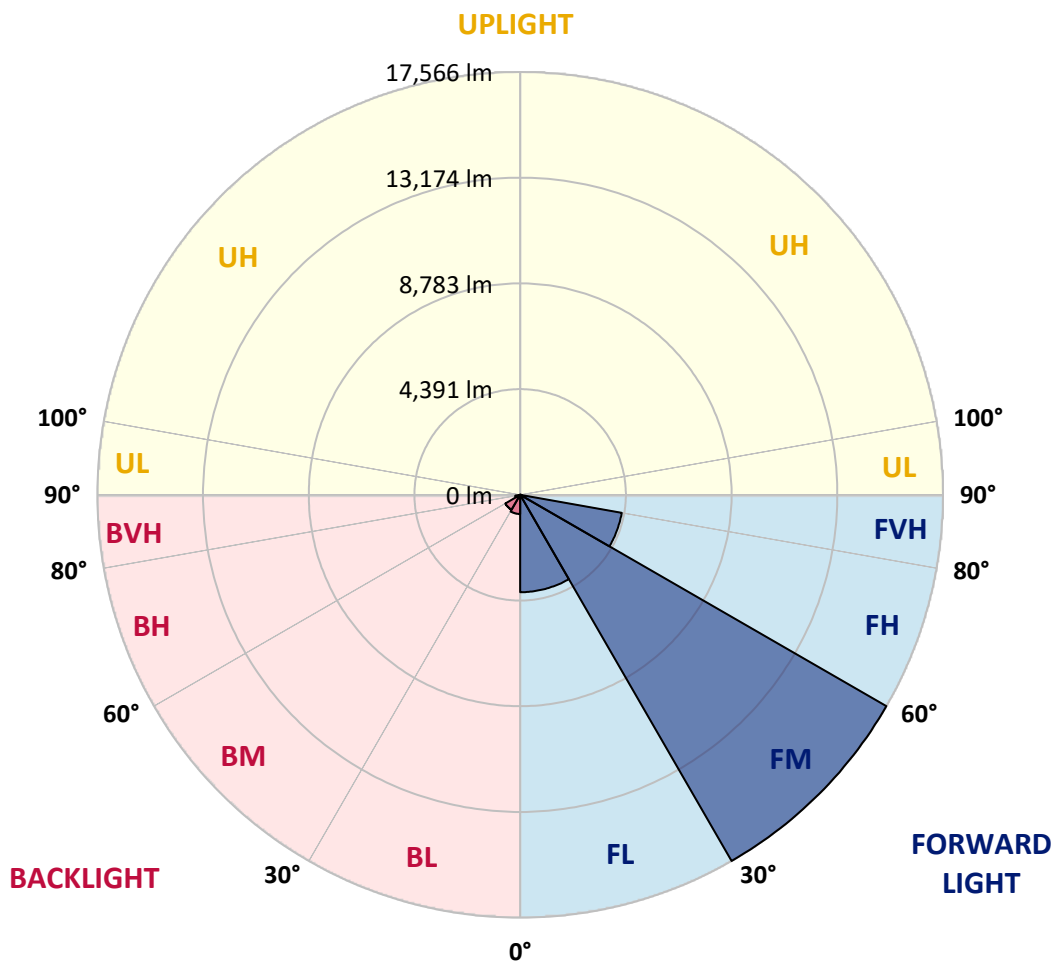
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	4045.7	14.6			
FM	(30°-60°)	17565.8	63.4			
FH	(60°-80°)	4284.1	15.5			G2/5000
FVH	(80°-90°)	63.2	0.2			G1/100
BL	(0°-30°)	797.2	2.9	B2/1000		
BM	(30°-60°)	715.9	2.6	B1/1000		
BH	(60°-80°)	205.0	0.7	B1/500		G1/500
BVH	(80°-90°)	10.1	0.0			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B2-U0-G2

Type II Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	58°	65°	75°	85°
0°	7839.0	7839.0	7839.0	7839.0	7839.0	7839.0	7839.0	7839.0	7839.0	7839.0	7839.0
2.5°	9431.8	9374.7	9315.6	9205.7	9104.3	8948.0	8732.6	8679.8	8510.8	8231.9	7972.1
5°	10245.0	10234.5	10194.3	10105.6	9995.8	9805.6	9562.7	9400.1	9138.1	8698.8	8198.1
7.5°	9763.4	9852.1	9997.9	10204.9	10344.3	10325.3	10139.4	9997.9	9738.1	9138.1	8419.9
10°	8229.8	8246.7	8447.4	8882.5	9571.2	10213.3	10456.3	10418.2	10179.5	9522.6	8614.3
12.5°	7689.0	7699.6	7746.1	7885.5	8333.3	9229.0	10329.5	10528.1	10509.1	9890.1	8821.3
15°	7731.3	7737.6	7750.3	7794.7	7921.4	8371.3	9687.4	10192.2	10720.3	10238.7	9024.1
17.5°	8065.1	8060.8	8020.7	7978.4	8018.6	8166.4	9032.5	9564.8	10675.9	10532.3	9190.9
20°	8715.7	8736.8	8601.6	8413.6	8316.4	8322.8	8709.3	9108.6	10426.7	10760.4	9315.6
22.5°	9630.3	9645.1	9423.3	9098.0	8812.8	8669.2	8776.9	8988.2	10139.4	10971.7	9417.0
25°	10722.4	10722.4	10411.9	9949.3	9507.8	9193.1	9100.1	9180.4	10029.6	11210.4	9518.4
27.5°	11901.1	11943.4	11537.8	10931.5	10348.5	9888.0	9596.5	9581.7	10114.1	11510.3	9632.4
30°	13183.3	13221.4	12739.7	11998.3	11307.5	10718.2	10270.4	10173.2	10437.2	11913.8	9799.3
32.5°	14459.2	14490.9	13958.6	13202.3	12397.5	11704.7	11115.3	10961.1	11018.2	12503.2	10044.3
35°	16081.5	16087.9	15414.0	14514.1	13654.4	12841.1	12095.5	11943.4	11880.0	13246.7	10397.1
37.5°	17372.2	17321.5	16894.8	16043.5	15057.0	14207.8	13331.2	13132.6	12980.6	14292.3	10944.2
40°	17676.4	17676.4	17613.0	17357.4	16573.7	15756.2	14907.0	14611.3	14275.4	15523.9	11679.3
42.5°	16884.2	16934.9	17353.2	17908.7	17915.1	17391.2	16561.0	16311.8	15720.3	16926.5	12482.0
45°	15111.9	15126.7	16130.1	17629.9	18648.1	18948.0	18335.4	17991.1	17171.5	18384.0	13217.1
47.5°	14474.0	14520.5	14947.2	16780.7	18703.0	20209.1	20038.0	19564.8	18515.0	19714.8	13903.7
50°	13493.9	13550.9	14072.6	15530.2	18208.7	21018.1	21666.6	21159.7	19738.0	20823.8	14243.8
52.5°	11149.1	11237.8	11975.1	13876.2	16972.9	21051.9	23158.0	22853.8	20990.7	21417.4	14203.6
55°	7672.1	7737.6	8597.4	10832.3	14480.3	20019.0	23800.1	24009.3	22108.1	21550.5	14009.3
56°	6189.3	6434.3	7063.8	9229.0	13060.8	19140.2	23652.3	24136.0	22439.8	21529.3	13924.8
57.5°	4091.7	4138.1	4824.7	6687.8	10487.9	17232.8	22984.8	23865.6	22866.5	21421.6	13863.5
60°	1924.4	1945.5	2192.6	3086.2	5676.0	12558.1	20815.4	22277.1	23022.8	21195.6	13861.4
62.5°	1254.8	1259.0	1288.5	1472.3	2321.5	6839.9	17256.0	19359.9	21727.9	21170.2	13821.3
65°	1033.0	1043.5	1007.6	1030.8	1214.6	2579.2	12171.5	15092.9	18688.2	20574.5	13369.2
67.5°	910.4	912.5	864.0	836.5	889.3	1132.2	6132.2	9520.5	13977.6	17482.0	11011.8
70°	830.2	828.1	773.1	709.8	711.9	752.0	1998.3	3954.4	7733.4	10380.2	6322.3
72.5°	737.2	741.4	709.8	621.0	591.5	532.3	752.0	1066.7	2632.0	3333.3	1666.7
75°	646.4	637.9	606.3	549.2	494.3	357.0	378.1	454.2	686.5	680.2	359.1
77.5°	490.1	481.6	496.4	468.9	386.6	249.3	207.0	236.6	310.5	289.4	145.8
80°	373.9	369.7	338.0	401.4	352.8	188.0	141.5	145.8	169.0	154.2	71.8
82.5°	270.4	268.3	255.6	247.1	223.9	137.3	107.7	114.1	126.7	107.7	52.8
85°	103.5	103.5	200.7	169.0	154.2	92.9	76.0	82.4	97.2	78.2	35.9
87.5°	16.9	16.9	135.2	112.0	69.7	46.5	48.6	52.8	57.0	46.5	27.5
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	7839.0	7839.0	7839.0	7839.0	7839.0	7839.0	7839.0	7839.0	7839.0	7839.0	7839.0
2.5°	7817.9	7676.4	7365.9	7065.9	6804.0	6516.7	6370.9	6201.9	6138.6	6011.8	6024.5
5°	7898.2	7602.4	6979.3	6322.3	5720.3	5107.7	4672.6	4262.8	4034.6	3808.6	3808.6
7.5°	7980.6	7528.5	6565.3	5515.4	4501.5	3451.6	2708.1	2112.4	1780.7	1558.9	1552.6
10°	8037.6	7433.5	6094.2	4579.6	3084.1	1778.6	1073.1	845.0	762.6	726.7	724.5
12.5°	8111.5	7338.4	5557.7	3477.0	1713.1	845.0	669.6	633.7	618.9	610.5	610.5
15°	8174.9	7203.2	4907.0	2338.4	899.9	633.7	576.7	564.0	561.9	559.8	561.9
17.5°	8189.7	7011.0	4127.6	1368.8	652.7	553.4	528.1	517.5	517.5	515.4	515.4
20°	8155.9	6757.5	3265.7	845.0	564.0	509.1	481.6	468.9	466.8	466.8	466.8
22.5°	8086.2	6434.3	2414.4	640.0	513.3	468.9	433.0	420.4	420.4	422.5	424.6
25°	7999.6	6052.0	1658.2	551.3	475.3	426.7	390.8	378.1	382.3	386.6	388.7
27.5°	7889.7	5595.7	1085.8	477.4	424.6	384.5	352.8	344.3	352.8	361.2	365.4
30°	7779.9	5095.1	735.1	414.0	367.6	338.0	319.0	316.9	329.5	348.5	350.7
32.5°	7708.1	4581.7	555.6	371.8	323.2	297.8	289.4	293.6	312.6	333.8	338.0
35°	7701.7	4081.1	473.2	338.0	293.6	270.4	266.2	278.8	300.0	316.9	321.1
37.5°	7801.0	3612.2	428.8	312.6	270.4	247.1	240.8	264.0	283.1	300.0	304.2
40°	8001.7	3191.8	399.2	289.4	251.4	223.9	219.7	238.7	257.7	276.7	283.1
42.5°	8253.1	2798.9	365.4	266.2	230.2	198.6	194.3	209.1	228.1	255.6	259.8
45°	8470.6	2433.5	329.5	240.8	207.0	171.1	169.0	185.9	200.7	226.0	230.2
47.5°	8654.4	2129.3	295.7	213.3	177.4	152.1	150.0	158.4	166.9	190.1	194.3
50°	8557.2	1871.6	261.9	175.3	143.6	131.0	128.9	128.9	139.4	162.7	166.9
52.5°	8318.5	1711.0	230.2	145.8	118.3	112.0	105.6	107.7	118.3	128.9	131.0
55°	8126.3	1635.0	202.8	128.9	99.3	92.9	86.6	84.5	86.6	82.4	78.2
56°	8079.8	1626.5	196.5	124.6	95.1	86.6	78.2	73.9	71.8	63.4	61.3
57.5°	8058.7	1626.5	185.9	116.2	88.7	78.2	67.6	59.1	50.7	44.4	44.4
60°	8041.8	1637.1	173.2	101.4	76.0	63.4	48.6	35.9	29.6	29.6	29.6
62.5°	8005.9	1632.9	158.4	84.5	65.5	48.6	29.6	23.2	21.1	23.2	25.3
65°	7602.4	1516.7	139.4	67.6	50.7	33.8	16.9	16.9	19.0	23.2	25.3
67.5°	6125.9	1149.1	114.1	52.8	35.9	25.3	14.8	14.8	19.0	23.2	25.3
70°	3365.0	606.3	97.2	38.0	27.5	21.1	14.8	12.7	19.0	23.2	25.3
72.5°	821.7	253.5	88.7	29.6	25.3	19.0	12.7	12.7	19.0	23.2	25.3
75°	202.8	190.1	71.8	23.2	21.1	16.9	12.7	12.7	19.0	23.2	25.3
77.5°	95.1	251.4	48.6	21.1	19.0	14.8	12.7	12.7	19.0	23.2	23.2
80°	57.0	190.1	29.6	19.0	16.9	14.8	12.7	12.7	19.0	23.2	25.3
82.5°	33.8	54.9	21.1	19.0	16.9	12.7	12.7	12.7	19.0	23.2	25.3
85°	29.6	27.5	21.1	19.0	16.9	14.8	12.7	12.7	21.1	25.3	25.3
87.5°	23.2	21.1	19.0	16.9	16.9	14.8	12.7	12.7	19.0	23.2	25.3
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)